Supplemental Materials: Legends to Figures and Table

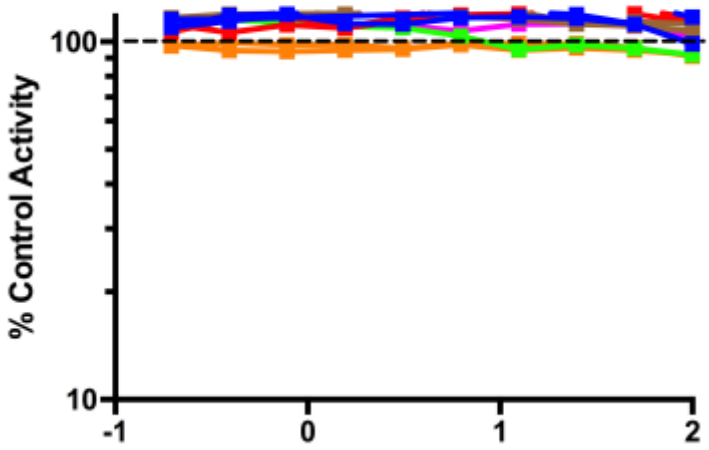
Supplementary Table 1. **Summary of flavonoid molecules tested in this study.** The molecule numbers used in this study (**1-20**) are shown along with the International Union of Pure and Applied Chemistry (IUPAC) chemical names and the corresponding chemical structures. The common names, if available, are provided in parentheses. The percent control activity, which reflects inhibitory potency, in the LasR/p*lasB-luxCDABE* and RhlR/p*rhlA-luxCDABE E. coli* reporter assays are provided. Percent control activity is the light production data normalized to that obtained in the absence of test compound. The standard deviation is given in parentheses, *n*=3.

Supplementary Figure 1. **Flavonoids do not inhibit expression of p*tac-luxCDABE*.** Response of the *E. coli strain* carrying the constitutive p*tac-luxCDABE* reporter to 100 μM phloretin (**1**) (blue), chrysin (**2**) (brown), narigenin (**3**) (red), baicalein (**9**) (light green), quercetin (**11**) (orange), and 7,8-dihydoxyflavone (**17**) (magenta). Percent control activity refers to data normalized to that obtained in the absence of inhibitor compound, *n*=3. The dotted line shows 100%.

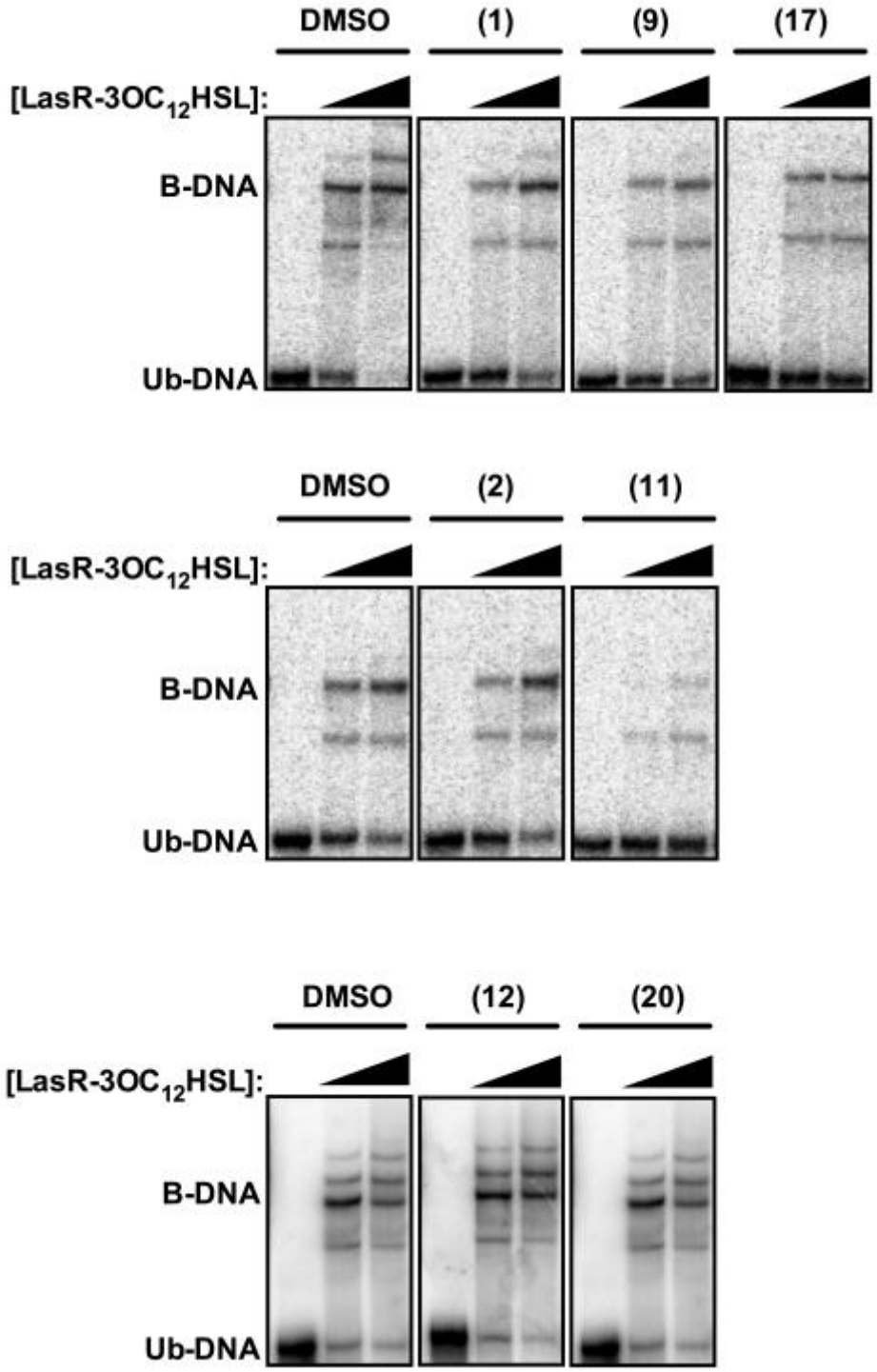
Supplementary Figure 2. **Flavonoids block LasR-3OC$_{12}$HSL from binding to DNA.** A) Representative gel shifts showing radiolabeled *lasB* promoter DNA sequence with 0, 45, and 90 nM (left to right) LasR-3OC$_{12}$HSL in the absence (DMSO) or presence of 100 μM of the indicated flavonoid compounds. DMSO was provided at 1% in the control experiment. The concentration of DNA probe is 1 pM. These gels were quantified using ImageJ and the data reported in main text Figure 5B. Ub-DNA and B-DNA denote unbound DNA and DNA bound to LasR-3OC$_{12}$HSL, respectively.

Supplementary Figure 3. **mBTL binds to and stabilizes LasR.** A) Response of the *E. coli* reporter strain carrying LasR and p*lasB-luxCDABE* to the specified concentrations of 3OC$_{12}$HSL (circles) or mBTL (triangles) in the presence of 0.1% arabinose. The EC$_{50}$ values for 3OC$_{12}$HSL and mBTL are 2.1 nM and 9.2 nM, respectively. B) Structures of 3OC$_{12}$HSL and mBTL.

Supplementary Figure 1

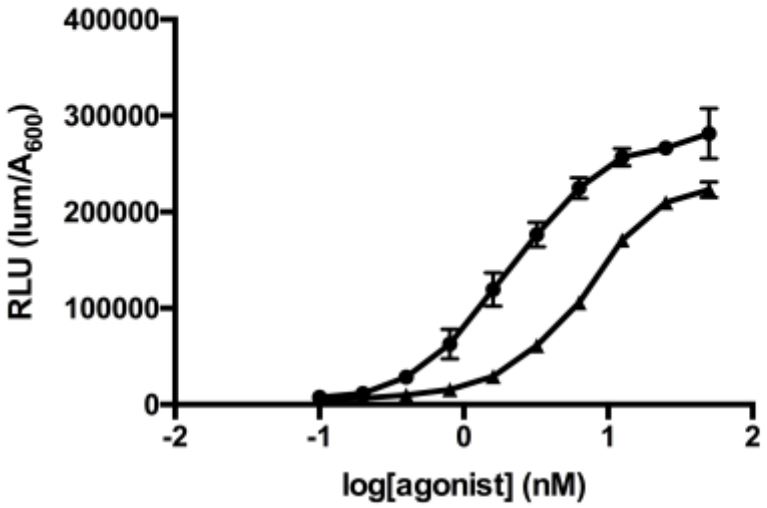


Supplementary Figure 2



Supplementary Figure 3

A.



B.